TITLE INDEX

Volume 53

1981

A

A critique of assimilative capacity (Campbell) (Communication) 604
A disposal-costing method for evaluating sludge dewatering chemicals (Flamang, Martire) 162
A fresh look at the Clean Water Act (Editorial) 1263
A look at EPA's new 1990 strategy (Monitor) 10
A new look for the Journal (Editorial) 1
Acid precipitation: crucial questions still remain unanswered (Monitor) 518
Activated sludge nickel toxicity studies (Sujarittanonta, Sherrard) 1314
Alterations in the BOD procedure for the 15th edition of "Standard Methods for the Examination of Water and Wastewater" (Young, J. C., McDermott, G. N., Jenkins, D.) 1253
Anaerobic activated carbon filter for the treatment of phenol-bearing wastewater (Khan, Suidan, Cross) 1519
Anaerobic digestion of brewery by-products (Keenan, Kormi) 66
Anaerobic treatment in a sludge bed system compared with a filter system (Frostell) 216
Application of predator-prey models to disinfection (Haas) 378

B

Biodegradability studies with organic priority pollutant compounds (Tabak, Quave, Mashni, Barth) 1503
Biological treatment of wool scouring wastewater (Chao, Yang) 311
Biological Wastewater Treatment: Theory and Applications (Book Review) 496a
Bringing about an end to ocean dumping (Monitor) 276

C

Changing times (Editorial) 409
Characterization of air pollutants from an activated sludge process (Scheff, Holden, Wadden) 223
Characterization of mass transfer parameters for adsorber modeling and design (Liu, Weber) 1541
Clay-soils permeability and hazardous waste storage (Green, Lee, Jones) 1347
Combined effects of cadmium and nickel on the activated sludge process (Bogby, Sherrard) 1609
Combined sewer overflow control—marginal benefit versus cost analysis (Reynolds, Butt, Goetz) 497
Comparative performance of synthetic adsorbents and activated carbon for specific compound removal from wastewaters (van Vliet, Weber) 1585
Comparisons of sealed digestion chamber and Standard Method COD tests (Messenger) 232
Compost filters for H_2S removal from anaerobic digestion and rendering exhausts (Rands, Cooper, Woo, Fletcher, Rolfe) 185
Computerized biological monitoring for demonstrating wastewater discharge (Gruber, Cairns, Hendricks) 505
Control of storm-generated pollution using a small urban lake (Oliver, Grigoropoulos) 594
Cost-effective water quality planning for urban areas (Ellis, Wycoff) 246
Coupled trickling filter-rotating biological contactor nitrification process (Marsh, Benefield, Bennett, Hartman) 1469
Criteria for achieving pathogen destruction during composting (Burge, Colacicco, Cramer) 1683

D

Data base development for the design of a radium-226 removal process (Averill, Huck, Kassakhian, Moffett, Webber) 1233
Design and cost comparison of biological nitrogen removal processes (Murphy, Wilson, Sutton, Lackey) 1294
Design to optimize multi-stage unit processes for peak flows (Noland, Mather) 340
Determining maximum influent concentrations of priority pollutants for treatment plants (Anthony, Breimhurst) 1457
Detroit—fresh clean water (Bierig, Davanzo, Hubbell, Pollard) (Feature) 1359
Digested sludge dewatering experiences at Orange County California (Clarke, Fox, Howard) 530
Direct measurement of gaseous nitrogen losses from an effluent irrigation area (Ryden, Lund, Whaley) 1677
Discharge standards based on geometric mean (Niku, Samaniego, Schroeder) 471
Dredged material evaluations: correlations between chemical and biological evaluation procedures (Laskowski-Hoke, Prater) (Communication) 1260
Dynamics of activated sludge in terms of organic carbon (Therien, Perdrieux) 576

E

Ecological Effects of Waste Water (Book Review) 24a
Economical and efficient phosphorus control at a domestic-industrial wastewater plant (Van Dam) 1732
Economics of sludge management (Hasit, Vesilind) 560
Effect of chlorinated coliforms on protozoan population growth (Berk, Botts) (Communication) 396
Effect of mean-cell residence time on organic composition of activated sludge effluents (Saunders, Dick) 201
Effects of hydrazine on the activated sludge process (Farmwald, MacNaughton) 565
Election 1980—water pollution in a minor key (Monitor) 7
Energy conservation for existing wastewater treatment plants (Burris) 536
Energy requirements for small wastewater treatment systems (Middlebrooks, Middlebrooks, Reed) 1172
Environmental control technology development for geothermal energy (Katz) (Feature) 1447
Environmental recovery in a marine ecosystem impacted by a sulfite process pulp mill (Cross, Ellis) 1339
EPA needs administrative and engineering excellence (Guarino) (Presidential Message) 4
Evaluation of automatic suspended solids sampling procedures (Reed) 1481
Evaluation of extended aeration activated sludge package plants (Guo, Thirumurthi, Jank) 33
Evaluation of high- and low-speed centrifuges (Wankoff, Lauletta, Shah) 1568
Examination of process parameters affecting sludge dewatering with a diaphragm filter press (Pietila, Joubert) 1708
Expecting bad times, panel members cautious about future of program (Monitor) 1668

TITLE INDEX

Volume 53

1981

A

A critique of assimilative capacity (Campbell) (Communication) 604
A disposal-costing method for evaluating sludge dewatering chemicals (Flamang, Martire) 162
A fresh look at the Clean Water Act (Editorial) 1263
A look at EPA's new 1990 strategy (Monitor) 10
A new look for the Journal (Editorial) 1
Acid precipitation: crucial questions still remain unanswered (Monitor) 518
Activated sludge nickel toxicity studies (Sujarittanonta, Sherrard) 1314
Alterations in the BOD procedure for the 15th edition of "Standard Methods for the Examination of Water and Wastewater" (Young, J. C., McDermott, G. N., Jenkins, D.) 1253
Anaerobic activated carbon filter for the treatment of phenol-bearing wastewater (Khan, Suidan, Cross) 1519
Anaerobic digestion of brewery by-products (Keenan, Kormi) 66
Anaerobic treatment in a sludge bed system compared with a filter system (Frostell) 216
Application of predator-prey models to disinfection (Haas) 378

B

Biodegradability studies with organic priority pollutant compounds (Tabak, Quave, Mashni, Barth) 1503
Biological treatment of wool scouring wastewater (Chao, Yang) 311
Biological Wastewater Treatment: Theory and Applications (Book Review) 496a
Bringing about an end to ocean dumping (Monitor) 276

C

Changing times (Editorial) 409
Characterization of air pollutants from an activated sludge process (Scheff, Holden, Wadden) 223
Characterization of mass transfer parameters for adsorber modeling and design (Liu, Weber) 1541
Clay-soils permeability and hazardous waste storage (Green, Lee, Jones) 1347
Combined effects of cadmium and nickel on the activated sludge process (Bogby, Sherrard) 1609
Combined sewer overflow control—marginal benefit versus cost analysis (Reynolds, Butt, Goetz) 497
Comparative performance of synthetic adsorbents and activated carbon for specific compound removal from wastewaters (van Vliet, Weber) 1585
Comparisons of sealed digestion chamber and Standard Method COD tests (Messenger) 232
Compost filters for H_2S removal from anaerobic digestion and rendering exhausts (Rands, Cooper, Woo, Fletcher, Rolfe) 185
Computerized biological monitoring for demonstrating wastewater discharge (Gruber, Cairns, Hendricks) 505
Control of storm-generated pollution using a small urban lake (Oliver, Grigoropoulos) 594
Cost-effective water quality planning for urban areas (Ellis, Wycoff) 246
Coupled trickling filter-rotating biological contactor nitrification process (Marsh, Benefield, Bennett, Hartman) 1469
Criteria for achieving pathogen destruction during composting (Burge, Colacicco, Cramer) 1683

D

Data base development for the design of a radium-226 removal process (Averill, Huck, Kassakhian, Moffett, Webber) 1233
Design and cost comparison of biological nitrogen removal processes (Murphy, Wilson, Sutton, Lackey) 1294
Design to optimize multi-stage unit processes for peak flows (Noland, Mather) 340
Determining maximum influent concentrations of priority pollutants for treatment plants (Anthony, Breimhurst) 1457
Detroit—fresh clean water (Bierig, Davanzo, Hubbell, Pollard) (Feature) 1359
Digested sludge dewatering experiences at Orange County California (Clarke, Fox, Howard) 530
Direct measurement of gaseous nitrogen losses from an effluent irrigation area (Ryden, Lund, Whaley) 1677
Discharge standards based on geometric mean (Niku, Samaniego, Schroeder) 471
Dredged material evaluations: correlations between chemical and biological evaluation procedures (Laskowski-Hoke, Prater) (Communication) 1260
Dynamics of activated sludge in terms of organic carbon (Therien, Perdrieux) 576

E

Ecological Effects of Waste Water (Book Review) 24a
Economical and efficient phosphorus control at a domestic-industrial wastewater plant (Van Dam) 1732
Economics of sludge management (Hasit, Vesilind) 560
Effect of chlorinated coliforms on protozoan population growth (Berk, Botts) (Communication) 396
Effect of mean-cell residence time on organic composition of activated sludge effluents (Saunders, Dick) 201
Effects of hydrazine on the activated sludge process (Farmwald, MacNaughton) 565
Election 1980—water pollution in a minor key (Monitor) 7
Energy conservation for existing wastewater treatment plants (Burris) 536
Energy requirements for small wastewater treatment systems (Middlebrooks, Middlebrooks, Reed) 1172
Environmental control technology development for geothermal energy (Katz) (Feature) 1447
Environmental recovery in a marine ecosystem impacted by a sulfite process pulp mill (Cross, Ellis) 1339
EPA needs administrative and engineering excellence (Guarino) (Presidential Message) 4
Evaluation of automatic suspended solids sampling procedures (Reed) 1481
Evaluation of extended aeration activated sludge package plants (Guo, Thirumurthi, Jank) 33
Evaluation of high- and low-speed centrifuges (Wankoff, Lauletta, Shah) 1568
Examination of process parameters affecting sludge dewatering with a diaphragm filter press (Pietila, Joubert) 1708
Expecting bad times, panel members cautious about future of program (Monitor) 1668

F

Factors affecting effluent variability from activated sludge processes (Niku, Schroeder) 546
Factors affecting the fate of heavy metals in the activated sludge process (Nelson, Chung, Hudson) 1323
Fault tree analysis and treatment plant instrumentation (Kelly, Allison) 43
Financing water treatment in other countries (Monitor) 1155
Fixed endpoint alkalinity determination (Pearson) 1243
Frustrated aspirations for watershed quality management (Cleary) (Feature) 291
Fundamentals of Soil Physics and Applications of Soil Physics (Book Review) 139a

G

GAO survey finds extensive treatment plant noncompliance (Monitor) 137
GAO's view of compliance (Editorial) 135
Groundwater Hydrology (Book Review) 239a
Groundwater Monitoring (Everett) (Book Review) 312a

H

Hazardous Waste Management: Disappointment of the seventies, expectations of the eighties (Breidenbach, Lederman, Pojasek) (Feature) 152
Heritage Foundation Report: Reagan team's blueprint to EPA (Feature) 16
High-solubility gas flotation (Conway, Nelson, Young) 1198
Hydraulics of intermittent sand filters loaded with single-cell oxidation pond effluent (Morgan, Huffman, Green, Judkins) 587
Hydrology and Quality of Water Resources (Book Review) 641a

I

Improved performance in combined nitrification/denitrification of tannery waste (Panzer, Komanowsky, Senske) 1434
Improving the development of water quality standards (Noss, Marks) (Feature) 426
Industrial pretreatment needs to be overhauled at the national level (WPCF Position Paper) (Feature) 1452
Infiltration/inflow source identification by comprehensive flow monitoring (DeCoite, Tsugita, Petroff) 1620
Influence of dissolved oxygen on activated sludge viability (Williamson, Nelson) 1533
Inhibition of nitrogenous BOD and treatment plant performance evaluation (Dague) 1738
International nutrient control technology for municipal effluents (Barth, Stensel) 1691
Introduction to Environmental Virology (Book Review) 371a
Is the water any better? (Moore) (Feature) 21

L

Learning to live with budget cuts (Editorial) 273
Limiting nutrient concept in activated sludge models (Sykes) 1213

M

Materials balance in aerated static pile composting (Sikora, Willson, Colacicco, Parr) 1702
Mathematical Modelling in Water and Wastewater Treatment (Book Review) 86a
Mediterranean cleanup—nations join forces (Monitor) 149
Metals removal and recovery from municipal sludge (Jenkins, Scheybeler, Smith, Baird, Lo, Haug) 25
Metro Chicago's study of energy alternatives for wastewater treatment (McMillan, Rimkus, Neil) 155
Mixing efficiencies in full-scale anaerobic digesters by tracer methods (Monteith, Stephenson) 78
Municipal wastewater treatment with the anaerobic attached microbial film expanded bed process (Jewell, Switzenbaum, Morris) 482
Municipal wastewater reutilization on cultivated soil (Terry, Tate) 85

N

Nitrification and denitrification of an industrial wastewater (Sutton, Bridle, Bedford, Arnold) 176
Nitrogen removal by free ammonia stripping from high pH ponds (Idelovitch, Michail) 1391
No more grants, better water quality measures, no national non-point-source programs now (WPCF Position Paper) (Feature) 430

O

Obtaining high-level wastewater disinfection with ozone (Stover, Jarnis) 1637
On the van Belle-Fisher statistic for water pollution monitoring via ecological change (Smith, Conquest) (Communication) 1648
One technique for estimating inflow with surcharge conditions (Nogj, Hollenbeck) 491
Operational problems with rotating biological contactors (Hitdlebaugh, Miller) 1283
Operator training is key to oxidation ditch start-up and operation (Sanks, Connell) 444

P

Parasite egg and cyst reduction in oxidation ditches and aerated lagoons (Panicker, Krishnamoorthi) 1413
Parasite ova in anaerobically digested sludge (Arther, Fitzgerald, Fox) 1334
Pipeline friction losses for wastewater sludges (Mulbarger, Copas, Kordic, Cash) 1303
Planning for groundwater protection (Editorial) 1665
Point-velocity discharge measurement method for sewers (Parr, Judkins, Jones) 113
Pollution loading to the Great Lakes from municipal sources on Ontario (Waller, Novak) 387
Polymer extraction from activated sludge (Novak, Haugan) 1420
Predicting reactor biomass concentration in a fluidized-bed system (Shieh, Sutton, Kos) 1574
Predicting the dynamics of oxygen utilization in the activated sludge process (Clifft, Andrews) 1219
Press series on clean water program challenged (Monitor) 1152
Procedures for estimating dry weather pollutant deposition in sewer systems (Pisano, Queiroz, Aronson, Blanc, O'Shaughnessy) 1627
Production of soluble organic nitrogen during activated sludge treatment (Parkin and McCarty) 99
Project outcomes correlate with public participation variables (Ellis, Disinger) (Feature) 1564
Protecting the nation's ground water (Monitor) 287

R

Reclamation of wastewater with a soil-turf filter: I. Removal of nitrogen (Anderson, Pepper, Kneebone) 1402
Reclamation of wastewater with a soil-turf filter: II. Removal of phosphorus, boron, sodium, and chlorine (Anderson, Pepper, Kneebone, Drake) 1408
Recommendations for regulatory modifications: the use of waste stabilization pond systems (Gloyna, Tischler) (Feature) 1559
Reduced energy usage with biological phosphorus removal (Dedyo, Doan) 1166
Report of 1981 WPCF Conference (Feature) 1672
Re-utilization of municipal wastewater sludges—metals and nitrate (Chang, Page, Bingham) 237

S

Safety and water quality (Editorial) 515
Secondary treatment waivers issues (Monitor) 1554
"Septic leachate surveys for lakeside sewer needs evaluation (Kerfoot, Skinner) 1717
Settleability of urban runoff pollution (Whipple, Hunter) 1726
Short-term acute bioassays to evaluate ammonia toxicity and effluent standards (Ruffier, Boyle, Kleinschmidt) 367
Simple statistics for interpreting environmental data (Berthouex, Hunter) 167
Simulation model for agricultural non-point-source pollution (Tub' s, Haith) 1425
Sludge: back into the ocean? (Monitor) 1442
Sludge management and energy independence (McDonald, Quinn, Jacobs) 190
Sludge treatment/handling, preliminary treatment, and instrumentation top O&M problem list (Monitor) 412
Solubilization of particulate organic carbon during the acid phase of anaerobic digestion (Eastman, Ferguson) 352
Sources of soluble organic nitrogen in activated sludge effluents (Parkin, McCarty) 89
Stability of activated sludge processes based on statistical measures (Niku, Schroeder) 457
Start-up and operation of an oxygen-activated advanced wastewater treatment system (Johnson) 451
Start-up of a physical-chemical plant (Lynch, Potter) 318
Successful sludge management at an activated sludge treatment plant (Grant, Biggers, Nielson, Salinas) 1378
Successful storage lagoon odor control (Poduska, Anderson) 299
Survey of treatment plant design and operation deficiencies (Smith, Daigh) 1272

T

Testing aeration equipment in conventional activated sludge plants (McKinney) 48, 1742
The Literature Review Issue (Editorial) 611
The many uses of remote sensing (Monitor) 420
The Reserve Mining Controversy: Science, Technology, and Environmental Quality (Book Review) 192a
The right to know about clean water (Editorial) 1151
The tug-of-wars in environmental engineering education (Monitor) 143
The Wayne County, Michigan, wastewater collection and treatment system (Egeland, Biehl) 1366
Tidal exchanges and far field effects (Officer) (Communication) 1551
To inhibit or not to inhibit: that is the question (Barth) (Communication) 1651
Total domestic wastewater costs pegged at $22 billion a year (Cullen, Burnett, Chamblee) (Feature) 522
Trace metal concentrations in oxidation ponds (Suffern, Fitzgerald, Szluha) 1599
Treatment of coal coking and coal gasification wastewaters (Luthy) 325
Type A zeolite in the activated sludge process—II: heavy metal removal (Carrondo, Lester, Perry) 344

U

Upgrading with rotating biological contactors for ammonia nitrogen removal (Poon, Chin, Smith, Mikucki) 1158
Upgrading with rotating biological contactors for BOD removal (Poon, Chin, Smith, Mikucki) 474
Urban snowmelt—characteristics and treatment (Bennett, Linstedt, Nilsgard, Battaglia, Pontius) 119

V

Vacuum filtration of sludge in a large treatment system (Moehlman, Lindsey, Sarich) 1385
Vacuum wastewater collection: the alternative selected in Queen Anne's County, Maryland (Hassett and Starnes) 59
Viral transport to ground water at a wastewater land application site (Moore, Sagik, Sorber) 1492

W

Waste Recycling and Pollution Control Handbook (Book Review) 86a
Wastewater Engineering: Collection and Pumping of Wastewater (Book Review) 745a
Wastewater Engineering Design for Unsewered Areas (Book Review) 643a
Water reuse: ultrafiltration of industrial and municipal wastewaters (Christensen, Plaumann) 1206
What should replace the construction grants program? (Editorial) 1441
WPCF roundtable discussion—Congressional staffers take a retrospective look at PL 92-500 (Monitor) 1264, 1370

AUTHOR, GEOGRAPHICAL, AND SUBJECT INDEX

Volume 53

1981

A

Acid rain, review of 518
Activated carbon, anaerobic filters 1519
  versus synthetic adsorbents 1585
Activated sludge, gas flotation 1198
  mean-cell residence time 201
  nitrification-denitrification 1294
  nutrient limiting concept 1213
Activated sludge process, air pollutants 223
  and nickel 1314
  ATP viability 1533
  cadmium and nickel effects 1609
  energy requirements 1172
  heavy metals fate 1323
  hydrazine 565
  management 1378
  nutrient control 1691
  organic carbon 576
  organic nitrogen 99
  oxygen utilization 1219
  package plant aeration 33
  soluble organic nitrogen 89
  wool scouring 311
  zeolite 344
Activated sludge treatment (Literature Review) 700
Adsorbent performance, versus activated carbon 1585
Adsorption modeling, mass transfer 1541
Advanced wastewater treatment, *see AWT* 1166
Advendt, R. J., treatment reliability (Discussion) 1658
Aerated composting, materials balance 1702
Aerated lagoons, parasite reduction 1413
Aeration, extended 33
  in sludge management 1378
Agricultural runoff, mathematical models 1425
Agriculture, use of sludge 237
Air pollutants, activated sludge process 223
Air pollution control, compost filters 185
Alabama Association for WPC (meeting report) 381a
Algae removal, by sand filters 587
Algal growth, lakes 1717
Alkalinity determination, fixed endpoint 1243
Allison, R. C., plant instrumentation 43
Amendments, Clean Water Act 300a
Ammonia, EPA review 28a
Ammonia nitrogen, removal with RBCs 474
Ammonia stripping, high pH ponds 1391
Ammonia toxicity, fish bioassays 367
Anaerobic digestion, acid phase studies 352
  parasite viability 1334
Anaerobic filters, activated carbon 1519
Anaerobic processes (Literature Review) 711
  digesters 78
  methane production 66
  wastewater treatment 482
Analysis, COD 232
  influent determination 1457
  new BOD procedures 1253
Analysis of inorganics (Literature Review) 620
Analysis of organics (Literature Review) 659
Analytical procedures, alkalinity determination 1243
Anderson, B. D., sludge odor control 299
Anderson, E. L., soil-turf filters 1402, 1408
Andrews, J. F., oxygen utilization 1219
Anthony, R. M., pretreatment determination 1457
Application, land 1402, 1408
Appropriations Committees, Congress 373a
Arizona W & PCA (meeting report) 580a
Arkansas WPCA (meeting report) 578a
Arnold, J., nitrification/denitrification 176
Aronson, G. L., solids deposition 1627
Arther, R. G., sludge parasites 1334
Assimilative capacity, critique of 604, 1653
ATP, activated sludge process 1533
Automatic sampling, suspended solids 1481
Averill, D. W., uranium wastes 1233
AWT, bypasses and combined sewers 340
  energy conservation 1166
  logic tree instrumentation 43
  plant start-up problems 451

B

Bacteriophage f2, pathogen destruction 1683
Bagby, M. M., activated sludge process 1609
Baird, R., sludge metal removal 25
Barth, E. F., BOD inhibition (Communication) 1651
  nutrient control 1691
  priority pollutant biodegradability 1503
Battaglia, G. M., urban snowmelt 119
Bedford, W. K., nitrification/denitrification 176
Bench-scale, activated sludge viability 1533
  dissolved gas flotation 1198
  nitrification/denitrification 1434
Benefield, L., biological nitrification 1469
Bennett, E. R., biological nitrification 1469
  urban snowmelt 119
Berk, S. G., protozoa and chlorination (Communication) 396
Berthouex, P. M., data analysis 167
Best conventional technology, rules overturned 566a
Biehl, T. G., Wayne County (Mich.) wastewater treatment (Feature) 1366
Bierig, H. W., Detroit wastewater treatment (Feature) 1359
Biggers, M. A., sludge management 1378
Bingham, F. T., land application of wastewater solids 237
Bioassay, fish and ammonia 367
Bioassays (Literature Review) 974
  priority pollutants 1503
Biochemical oxygen demand, *see BOD*
Biodegradability, hydrazine 565
  priority pollutants 1503
Biofiltration, soil-turf filters 1402, 1408
Biological filters (Literature Review) 687
Biological monitoring, computerization 505
Biological nitrification, design considerations 1469
Biological reactors, fluidized bed systems 1574
Biological waste treatment, coal wastes 325
Biomass, fluidized bed systems 1574
Blanc, F. C., solids deposition 1627
BOD, inhibition of 1738
BOD, inhibition of (Communication) 1651
  removal with RBCs 1158
  Standard methods changes 1253
Boron removal, soil-turf filters 1408
Botts, J. A., protozoa and chlorination (Communication) 396
Boyle, W., ammonia bioassays 367
Breidenbach, A. W., hazardous waste management (Feature) 152
Breimhurst, L. H., pretreatment determination 1457
Brewery wastes, energy recovery 66
Bridle, T. R., nitrification/denitrification 176
British Columbia Water & Waste Assoc. (meeting report) 444a
Budget, 1982 Carter version 142a
  EPA update 417a
  Reagan Administration 244a
Burge, W. D., sludge pathogen destruction 1683
Burnett, C. H., 1980 EPA Needs Survey (Feature) 522
Burris, B. E., energy conservation 536
Butt, J. L., combined sewer overflow 497
Bypasses, at AWT plants 340

C

Cadmium, in activated sludge process 1609
Cairns, J., Jr., assimilative capacity (Discussion) 1653
Cairns, J., Jr., biological monitoring 505
California WPCA (meeting report) 446a
Campbell, I. C., assimilative capacity (Communication) 604, 1653
Canada, uranium mine effluents 1233
Capital costs, sludge management 560
Carbon, activated 1519
  activated sludge process 576
Carbon dioxide, for gas flotation 1198
Carrondo, M. J. T., zeolite 344

Carter, President's farewell address 142a
Cash, F. M., sludge line friction losses 1303
Central States WPCA (meeting report) 646a
Centrifugation, evaluation 1568
sludge dewatering 530
CEQ, McAvoy nomination withdrawn 689a
Chafee bill, Clean Water Act revisions 417a
Chamblee, J. A., 1980 EPA Needs Survey (Feature) 522
Chang, A. C., land application of wastewater solids 237
Chao, A. C., wool scouring effluents 311
Chelates, for metal recovery 25
Chemical industry wastes (Literature Review) 851
Chesapeake WPCA (meeting report) 646a
Chin, H. K., RBC upgrading 474, 1158
Chlorine removal, soil-turf filters 1408
Christensen, E. R., ultrafiltration 1206
Chung, A. K., heavy metals fate 1323
Cities, snow runoff 119
Clarke, W. N., sludge dewatering 530
Clay, as hazardous waste liner 1347
Clean Water Act, Chafee bill 417a
1981 amendments passed 738a
1981 House/Senate bill comparisons 743a
retrospective discussion 1264, 1370
301(h) waivers (Monitor) 1554
Clean water program, 1981 conference panel examines 1668
Cleary, E. J., watershed management (Feature) 291
Clifft, R. C., oxygen utilization 1219
Coal and coal mine drainage (Literature Review) 814
Coal wastes, pre- and biological treatment 325
COD, analytical comparison 232
removal efficiency 1609
Coincineration, and energy production 190
Colacicco, D., composting materials 1702
Colacicco, D., sludge pathogen destruction 1683
Collection systems, I/I identification 1620
(Literature Review) 748
solids deposition 1627
vacuum type 59
Combined sewer overflows, Great Lakes 387
treatment alternatives 497
Combined sewers, and AWT 340
solids deposition 1627
Compost filters, air pollution control 185
Composting, materials balance 1702
pathogen destruction criteria 1683
Computer modeling, oxygen utilization 1219
Computer simulation, water quality planning 246
Computerization, effluent monitoring 505
Congress, no. of environmentalists 377a
Connell, J. E., oxidation ditch start-up 444
Conquest, L. L., van Belle-Fisher statistic (Communication) 1648
Consent decree, EPA 1503
Conservation, energy 536, 1166
Construction cost index, EPA 3Q-1980 30a
EPA 4Q-1980 143a
EPA 1Q-1981 308a
EPA 2Q-1981 572a
EPA 3Q-1981 740a
Construction grants, governors' position 742a
Construction grants, grant-awarding authority 571a
1982 proposed cuts 194a
House appropriations 566a
inspector general report 413a
reconciliation bills 568a
Construction grants funding (WPCF Position Paper) 430
Construction grant needs, 1980 EPA 522
Construction grants program, employment data 198a
NUCA report 308a
Construction grants reform, Roe bill 688a
Consumer price index, EPA effects 642a
Conway, R. A., gas flotation 1198
Cooper, D. E., compost filters 185
Copas, S. R., sludge line friction losses 1303
Cost-benefit analysis, overflow treatment 497
Costle, Douglas M. 143a
Costs, centrifugation 1568
vacuum sewers 59
sludge dewatering 530
sludge management 560
static pile composting 1702
treatment energy 536
Council on Environmental Quality, eleventh report 143a
1982 budget 245a
1982 budget 377a
Cramer, W. N., sludge pathogen destruction 1683
Crites, R. W., overland flow system (Discussion) 1745
Crop application, sludge 237
Cross, S. F., ecosystem recovery 1339
Cross, W. H., anaerobic filters 1519
Crosser, M. L., attached-film anaerobic reactor 1146
Cullen, M. J., 1980 EPA Needs Survey (Feature) 522

D

Dague, R. E., nitrogenous BOD inhibition 1738
Daigh, R. V., plant survey 1272
Dairy wastes (Literature Review) 795
Data analysis, graphical 167
Davanzo, A. C., Detroit wastewater treatment (Feature) 1359
DeCoite, D. C. W., I/I monitoring 1620
Dedyo, J., energy conservation 1166
Denitrification, activated sludge 1294
(Literature Review) 720
losses through irrigation 1677
Design, package plant aeration 33
adsorbers 1541
Detroit (Mich.), wastewater treatment 1359
Developing countries, wastewater treatment 1413
Dewatering, sludge 530
sludge management 1378
vacuum filtration 1385
Dewatering sludge, with polymers 162
Dick, R. I., mean cell residence time 201
Discharge standards, geometric mean 471
Disinfection (Literature Review) 739
mathematical models 378
ozone 1637
Disinger, J. F., public participation (Feature) 1564
Disposal costs, sludge dewatering 162
Dissolved oxygen, activated sludge viability 1533
transfer rates 48, 1742
water quality planning 246
in BOD test 1253
DO in streams (Literature Review) 916
Doan, R., Jr., energy conservation 1166
Drake, R. J., soil-turf filters 1408
Dredged material, biological and chemical evaluation 1260
DuPont, effect of EPA regulations 198a

E

Eastman, J. A., acid phase anaerobic digestion 352
Ecological effects, wastewater 24a
Economics, energy conservation 1166
energy reduction 155
sludge management 560
Economics of treatment (Literature Review) 615
Ecosystem recovery, from sulfites 1339
Editorials
A new look for the Journal 1
GAO's view of compliance 135
Learning to live with budget cuts 273
Changing times 409
Safety and water quality 515
The Literature Review Issue 611
The right to know about clean water 1151
A fresh look at the Clean Water Act 1263
The Federation conference as a national forum 1355
What should replace the construction grants program? 1441
Volunteerism under fire 1553
Planning for groundwater protection 1665
EDTA, sludge metal removal 25
Education, environmental engineering 143
Effects, from toxic influents 1457
Effluent monitoring, biological 505
Effluent quality, mean-cell residence time 201
nitrogen 89
radium removal processes 1233
variability factors 546
Effluent standards, bioassay 367
Egeland, D. R., Wayne County (Mich.) wastewater treatment (Feature) 1366
Electric sensors, for treatment plants 43
Electrolytic analysis, alkalinity determination 1243
Electroplating regulations, pretreatment 198a
Electroplating wastes (Literature Review) 847
Ellis, D. V., ecosystem recovery 1339
Ellis, F. W., water quality planning 246
Ellis, R. A., public participation (Feature) 1564

Energy conservation, advanced wastewater treatment 1166
existing plants 536
treatment cost-analysis 155
Energy efficiency, comparative treatment processes 1172
Energy production, from coincineration 190
wastewater treatment 482
Energy recovery, brewery wastes 66
Engineering, educational conflicts 143
EPA, administrator confirmed 373a
agenda of regulations 377a
amendments to Clean Water Act 300a
ammonia 28a
associate administrators resign 689a
construction cost index 3Q-1980 30a
construction cost index 4Q-1980 143a
construction costs index 1Q-1981 308a
construction costs index 2Q-1981 572a
construction costs index 3Q-1981 740a
Construction Grants Program, 1990 strategy 10
construction grants review 640a
critique of House Public Works Report 245a
hazardous wastes 30a
Heritage Report recommendations 16
1981 administration changes 413a
1982 appropriations 688a
ocean discharge criteria 29a
pretreatment 29a
proposed 1983 budget 738a
regional administrators 642a, 690a
regional appointments 742a
staffing changes 642a
water quality criteria 28a
Estuarine pollution (Literature Review) 925
Eutrophication (Literature Review) 908
Expanded bed processes, wastewater treatment 482
Extended aeration, composting of sludge 1702
package plant 33

F

Farmwald, J. A., hydrazine treatment 565
Federal regulations, calendar of 89a
Ferguson, J. F., acid phase anaerobic digestion 352
Filterpress, process optimization 1708
Filters, activated carbon 1519
anaerobic sludge 216
vacuum 1385
Financing water treatment 1155
Fish, effects of ammonia 367
in oxidation ponds 1599
Fitzgerald, P. R., sludge parasites 1334
Fitzgerald, S. M., metals accumulation 1599
Fixed-bed adsorbers, predictive model 1585
Fixed-film reactors, predicting biomass 1574
Flamang, M. A., sludge dewatering polymers 162
Fletcher, G. C., compost filters 185
Florida PCA (meeting report) 315a
Flotation, and carbon dioxide 1198
Flow measurement, sewers 113
Flow monitoring, I/I identification 1620
Fluidized-bed systems, reactor biomass 1574
Food processing wastes (Literature Review) 787
Fox, J. C., sludge parasites 1334
Fox, W., sludge dewatering 530
Freshwater invertebrates (Literature Review) 1007
Friction losses, sludge lines 1303
Frostell, B., sludge digestion 216
Funding, construction grants (WPCF Position Paper) 430

G

Gas transfer rates, oxygen 48, 1742
Gasification, of nitrogen 1677
General Accounting Office, treatment plant noncompliance 137
Geometric mean, discharge standards 471
Georgia W & PCA (meeting report) 693a
Geothermal energy, environmental effects (Feature) 1447
Gloyna, E. F., stabilization ponds (Feature) 1559
Glucose-glutamic acid check, for BOD test 1253
Goetz, J. G., combined sewer overflow 497
Gorsuch, A. M., EPA administrator confirmed 373a
Grant, F. A., sludge management 1378
Graphical analysis, treatment plant performance 167
Great Lakes, phosphorus effects 306a
pollution loadings 387
Green, T., sand filters 587
Green, W. J., hazardous wastes 1347
Grigoropoulos, S. G., urban runoff control 594
Groundwater, and hazardous wastes 1347
(Literature Review) 921
sludge application 237
viral transport 1492
Groundwater leachate, septic systems 1717
Groundwater recharge, soil-turf filters 1402, 1408
Groundwater strategy, EPA 287
Gruber, D., biological monitoring 505
Guarino, C. F., WPCF Presidential message 4, 1356
Guo, P. H. M., package plant aeration 33

H

Haas, C. N., disinfection 378
Haith, D. A., non-point source pollution 1425
Hartman, R., biological nitrification 1469
Hasit, Y., sludge management 560
Hassett, A. F., vacuum sewers 59
Haug, R. T., sludge metal removal 25
Hawaii WPCA (meeting report) 203a
Hazardous waste management, scenario of 152
Hazardous wastes, and clay liners 1347
EPA 30a
Head loss, sludge lines 1303
Health effects, toxic influents 1457
Health effects of treatment (Literature Review) 776
Heavy metal removal, zeolite 344
Heavy metals, fate in activated sludge 1323
effects on activated sludge (Literature Review) 1609
(Literature Review) 993
in oxidation ponds 1599
municipal sludge 237
nickel toxicity 1314
Hendricks, A. C., biological monitoring 505
Hitdlebaugh, J. A., rotating biological contactors 1283
Holden, J. A., treatment plant emissions 223
Hollenbeck, A. J., sanitary sewer inflow 491
Honolulu, Hawaii, Operation Report 1746
House of Representatives, environment committees 196a
Howard, W. R., sludge dewatering 530
Hubbell, J. W., Detroit wastewater treatment (Feature) 1359
Huck, P. M., uranium wastes 1233
Hudson, M. C., heavy metals fate 1323
Huffman, G. L., sand filters 587
Hunter, J. V., runoff settleability 1726
Hunter, W. G., statistical analysis 167
Hydrazine, activated sludge process 565
Hydrogen sulfide, compost filter removal 185
Hydrolysis, sludge digestion 352

I

Idelovitch, E., ammonia stripping 1391
Illinois WPCA (meeting report) 446a
Indiana WPCA (meeting report) 147a
Indicator species, marine ecosystems 1339
Industrial cost exclusion, EPA report 300a
House rejects 375a
Industrial wastes (Literature Review) 787
hydrazine 565
lagoons 176
nitrification/denitrification 1434
phenols 1519
tanneries 1732
Industrial wastewater, ultrafiltration 1206
Infiltration/inflow, flow monitoring 1620
mathematical models 491
Inhibition, nitrogenous BOD 1738
Innovative/alternative technology, Step 1 eligibility 88a
Innovative and alternative processes, anaerobic 482
Inspector general, EPA 413a
Reagan firing of 194a
Instrumentation, based on logic tree (Literature Review) 43 675
ozone disinfection 1637
International Joint Commission, phosphorus report 306a
Invertebrate indicators, marine ecosystems 1339
Ion exchangers, modeling and design 1541
Iowa WPCA (meeting report) 695a
Irrigation, and nitrogen losses 1677
viral transport 1492

J

Jacobs, A., coincineration 190
Jank, B. E., package plant aeration 33
Jarnis, R. W., ozone disinfection 1637
Jenkins, D., standard methods BOD test 1253
Jenkins, R. L., sludge metal removal 25
Jewell, W. J., anaerobic treatment 482
Johnson, J. A., start-up experiences 451
Joint treatment, of tannery wastes 1732
Jones, R. A., hazardous wastes 1347

Jones, T. E., sewer flow measurement 113
Joubert, P. J., dewatering, by filter press 1708
Judkins, J. F., Jr., sand filters 587
sewer flow measurement 113

K

Kassakhian, G. H., uranium wastes 1233
Katz, G., geothermal energy (Feature) 1447
Keenan, J. D., energy recovery 66
Kelly, D. L., plant instrumentation 43
Kentucky-Tennessee WPCA (meeting report) 93a
Kerfoot, W. B., septic leachates 1717
Khan, K. A., anaerobic filters 1519
Kinetics, ammonia nitrogen removal 474
Kleinschmidt, J., ammonia bioassays 367
Kneebone, W. R., soil-turf filters 1402, 1408
Komanowsky, M., nitrification/denitrification 1434
Kordic, J. R., sludge line friction losses 1303
Kormi, I., energy recovery 66
Kos, P., fluidized-bed systems 1574
Krishnamoorthi, K. P., parasite reduction 1413

L

Laboratory analysis, COD comparison 232
Lackey, S. L., nitrification/denitrification 1294
Lagoons, and heavy metals 1599
(Literature Review) 709
solids retention time 176
upgrading by sand filters 587
Lakes, septic leachates 1717
Land application, energy efficiency 1172
(Literature Review) 767
municipal sludge 237
viral transport 1492
wastewater 85
Laskowski-Hoke, R. A., dredged material evaluation (Communication) 1260
Lauletta, T., centrifuge evaluation 1568
Leachates, from septic tanks 1717
Lederman, P. B., hazardous waste management (Feature) 152
Lee, G. F., hazardous wastes 1347
Legislation (Literature Review) 617
Lester, J. N., zeolite 344
Lindsey, K. R., sludge dewatering 1385
Linstedt, K. D., urban snowmelt 119
Liu, K. T., mass transfer parameters 1541
Lo, M. P., sludge metal removal 25
Loadings, Great Lakes 387
Logic tree, and instrumentation development 43
Lund, L. J., nitrogen loss 1677
Luthy, R. G., coal wastes 325
Lynch, W. O., physical-chemical treatment 318

M

MacNaughton, M. G., hydrazine treatment 565
Maintenance, compost filters 185
energy conservation 536
of centrifuges 1568
Management, sludge 1378
Manning equation, sewer flow 113
Marine pollution (Literature Review) 925
Marks, D. H., water quality standards (Feature) 426
Marine ecosystem, recovery of 1339
Marsh, D., biological nitrification 1469
Martire, A. A., sludge dewatering polymers 162
Mashni, C. I., priority pollutant biodegradability 1503
Mass transfer, adsorber design 1541
Materials balance, composting 1702
Mathematical models, acid phase sludge digestion 352
activated sludge processes 1219
adsorber design 1541
agricultural runoff 1425
disinfection 378
fluidized-bed systems 1574
infiltration/inflow 491
oxygen utilization 1219
solids in sewers 1627
Mather, W. A., AWT bypasses 340
McCarty, P. L., organic nitrogen 99
soluble organic nitrogen 89
McDermott, G. N., standard methods BOD test 1253
McDonald, G. C., coincineration 190
McKinney, R. E., oxygen uptake rates 48, 1742
McMillan, H. H., energy cost-analysis 155
Mean-cell residence time, effluent quality 201
Measurement methodology, digester mixing 78
sewer flow 113
Mediterranean Sea, U. N. cleanup 149
Member Association reports (see individual associations
Messenger, A. L., COD analysis 232
Methane production, brewery wastes 66
Metals removal, in sludge 25
Michail, M., ammonia stripping 1391
Microbiological assay, priority pollutants 1503
Microbiology, of nutrient uptake 1213
Microbiology of water (Literature Review) 1083
Middlebrooks, C. H., energy requirements 1172
Middlebrooks, E. J., energy requirements 1172
Mikucki, W. J., RBC upgrading 474, 1158
Miller, R. D., rotating biological contactors 1283
Mining waste effluents, uranium 1233
Missouri WPCA (meeting report) 251a
Mixing, digesters 78
Model, activated sludge viability 1533
heavy metals fate 1323
Modeling, adsorbent 1585
oxygen utilization 1219
Moehlman, D., sludge dewatering 1385
Moffett, D., uranium wastes 1233
Monitoring, flow 1620
(Literature Review) 675
marine invertebrates 1339
van Belle-Fisher statistic (Communication) 1648
Monteith, H. D., digester mixing efficiency 78
Moore, B. E., viral transport 1492
Moore, J. E., Jr., 1981 WPCF Conference speech (Feature) 21
Morgan, J. M., sand filters 587
Morris, J. W., anaerobic treatment 482
Mueller, J. A., oxygen uptake rates (Discussion) 1742
Mulbarger, M. C., sludgeline friction losses 1303
Municipal loadings, Great Lakes 387
Municipal wastewater, and ultrafiltration 1206
Municipalities, energy use and costs 155
Murphy, K. L., nitrification/denitrification 1294

N

Nebraska WPCA (meeting report) 38a
Needs survey, 1980 EPA 247a, 522
Neil, F. C., energy cost-analysis 155
Nelson, P. O., activated sludge viability 1533
heavy metals fate 1323
Nelson, R. F., gas flotation 1198
Nevada WPCA (meeting report) 749a
New England WPCA (meeting report) 35a
New Jersey WPCA (meeting report) 445a
New York WPCA (meeting report) 203a
Nickel, effects on activated sludge 1314, 1609
Nielson, C., sludge management 1378
Niku, S., effluent variability 546
geometric mean 471
performance stability 457
Nilsgard, V., urban snowmelt 119
Nitrate, municipal sludge 237
Nitrification, activated sludge 1294
and nickel effects 1314
and RBCs 1283
design considerations 1469
effects from heavy metals 1609
hydrazine 565
in nutrient control 1691
inhibition in BOD test 1253
Nitrification/denitrification, lagoons 176
industrial wastes 1434
Nitrogen, agricultural runoff 1425
losses through irrigation 1677
Nitrogen compounds, activated sludge 99
soluble 89
Nitrogen control, seminar summary 1691
Nitrogen removal, ammonia stripping 1391
soil-turf filters 1402
Nitrogenous BOD, inhibition 1738
Nogaj, R. J., sanitary sewer inflow 491
Noland, R. F., AWT bypasses 340
Non-point-source pollution (Literature Review) 901
control of (WPCF Position Paper) (Feature) 430
mathematical models 1425
settleability 1726
North Carolina WPCA (meeting report) 149a
North Dakota WPCA (meeting report) 35a
Noss, R. R., water quality standards (Feature) 426
Novak, Z., Great Lakes loadings 387
Nutrient assimilation, wastewater land application 85
Nutrient control, international controls 1691
Nutrients, the limiting concept 1213

O

O&M, WPCF survey (Monitor) 412
Oakland, California (Operations Report) 1660
Ocean discharge, EPA criteria waivers for 29a 689a
Ocean dumping, Philadelphia ceases sludge (Monitor) 89a 1442
termination of 276
Odor control, compost filters 185
Odors, in sludge 299
Office of Management and Budget, new director 89a
Officer, C. B., tidal exchanges (Communication) 1551
Ohio WPCC (meeting report) 694a
Oliver, L. J., urban runoff control 594
Onsite treatment (Literature Review) 733
Operating costs, for centrifuges 1568
sludge management 560
Operation, RBCs 1283
energy conservation 536
physical-chemical plant 318
centrifuges 1568
vacuum sewers 59
soluble nitrogen removal 89
Operations and maintenance (Literature Review) 737
sludge centrifugation 530
Operations problems, plant survey 1272
Operations Reports
Honolulu, Hawaii 1746
Oakland, California 1660
Pueblo, Colorado 1149
Tahoe, California 398
Truckee, California 398
Operator training, oxidation ditch 444
Organic chemicals, adsorbent performance 1585
priority pollutants 1503
Organics, soluble nitrogen-bearing 89
uptake of nutrients 1213
O'Shaughnessy, J. C., solids deposition 1627
Overcamp, T. J., sludge incineration (Discussion) 1440
Overflows, and AWT bypasses 340
Oxidation-reduction potential, sludge odors 299
Oxidation ditch, and operator training 444
parasite reduction 1413
Oxidation ponds, heavy metals 1599
sand filters 587
Oxygen transfer rates, activated sludge 48, 1742
Oxygen utilization, activated sludge process 1219
Ozone, disinfection 1637

P

Package plant, extended aeration 33
Page, A. L., land application of wastewater solids 237
Panicker, P. V. R. C., parasite reduction 1413
Panzer, C. C., nitrification/ denitrification 1434
Parasite, ova viability 1334
reduction in oxidation ditches and lagoons 1413
Parkin, G. F., organic nitrogen 99
soluble organic nitrogen 89
Parr, A. D., sewer flow measurement 113
Parr, J. F., composting materials 1702
Pathogens (Literature Review) 1112
Pathogens, destruction in composting 1683
Pearson, F., alkalinity determination 1243
Pepper, I. L., soil-turf filters 1402, 1408
Perdrieux, S., activated sludge process 576
Performance, of pure oxygen plant 451
treatment plant evaluation 1738
Permeability, of clay liners 1347
Perry, R., zeolite 344
Petroff, R., I/I monitoring 1620
Petroleum industry wastes (Literature Review) 824
pH, in nitrogen removal 1391
Phenols, anaerobic treatment 1519
Phosphorus, non-point-source pollution 1425
Phosphorus control, Great Lakes 306a
tannery wastes 1732
technology summary 1691
Phosphorus removal, energy conservation 1166
soil-turf filters 1408
Physical-chemical treatment, of industrial wastes 1434
plant start-up 318
radium 1233
Physicochemical treatment (Literature Review) 679
Pietila, K. A., dewatering by filter press 1708
Pilot plant studies, ozonation 1637
Pipes, solids deposition 1627
Pisano, W. C., solids deposition 1627
PL 92-500, retrospective discussion of 1264, 1370
Plant operation, effect on organic nitrogen 99
Plant performance, and variability 546
Plant survey, operations problems 1272
Plaumann, K. W. P., ultrafiltration 1206
Poduska, R. A., sludge odor control 299
Pojasek, R. B., hazardous waste management (Feature) 152
Pollard, F., Detroit wastewater treatment (Feature) 1359
Pollution Control Association of Oklahoma (meeting report) 381a
Pollution Control Association of Ontario (meeting report) 578a
Pollution loadings, Great Lakes 387
Pollution-Pricing (Book Review) 681a
Polymers, filter press 1708
sludge disposal economics 162
Ponds, stabilization (Feature) 1559
Pontius, F. W., urban snowmelt 119
Poon, C. P. C., RBC upgrading 474, 1158
Potter, L. R., physical-chemical treatment 318
Power industry wastes (Literature Review) 831, 965
Prater, B. L., dredged material evaluation (Communication) 1260
Predator-prey models, disinfection 378
Predictive models, sludge line friction losses 1303
Presidential message, 1981 WPCF President 4
Pretreatment, coal wastes 325
determination of priority pollutants 1457
EPA regulation 29a
regulations for electroplating 198a
regulations suspension 644a
WPCF position paper (Feature) 1452
Priority pollutants, secondary treatment 247a
biodegradability 1503
PRM 81-1, update on previous PRMs 304a
Process control, sludge digestion 216
Process dynamics, activated sludge 576
Process optimization, activated sludge 201
AWT bypasses 340
filter presses 1708
plant survey 1272
Process stability, statistical analysis 457
Program Advisory Memorandum (EPA), chlorination 306a
Protozoa, effects of chlorination 396
Public participation, environmental regulations 1564
Pueblo, Colo., Operation Reports 1149
Puerto Rico WPCA (meeting report) 647a

Q

Quave, S. A., priority pollutant biodegradability 1503
Queiroz, C., solids deposition 1627
Quinn, T., coincineration 190

R

R&D authorizations, fiscal 1981 89a
R&D cutbacks, EPA 570a
Radioactive wastes (Literature Review) 861
Radioisotopes, physical-chemical removal 1233
Rainfall runoff, compared with snowmelt 119
Randtke, S. J., carbon adsorption 512
Rands, M. B., compost filters 185
Rate-limiting factors, sludge digestion 352
Reactors, fluidized-bed systems 1574
sludge bed 216
Recharge, groundwater 1402, 1408
Reclamation, wastewater 1402, 1408
Reed, G. D., automatic sampling 1481
Reed, S. C., energy requirements 1172
Refuse, and coincineration 190
Regional administrators, EPA 572a
Regulatory reform, executive order 570a
Reagan Administration 196a
water regulations 304a
Regulatory review, EPA regulations 640a
Remote sensing, in water pollution control (Monitor) 420
Removal, organic chemicals 1585
Research & development, EPA 1982 funds 377a
House bill 644a
Retention, runoff settleability 1726
Reuse of wastewater, land application 85
steel pickling liquor 690a
Reynolds, D. T., combined sewer overflows 497
Rimkus, R. R., energy cost-analysis 155
Rittman, B. E., carbon column adsorption 512
River basin commissions, elimination of 304a
Rocky Mountain WPCA (meeting report) 93a
Rolfe, K. A., compost filters 185
Rotating biological contactors, ammonia nitrogen removal 474

operations problems 1283
trickling filter upgrading 1158
with trickling filters 1469
Ruffier, P., ammonia bioassays 367
Runoff, settleability 1726
Ryden, J. C., nitrogen loss 1677

S

Safety, compost filters 185
toxic influents 1457
Sagik, B. P., viral transport 1492
Salinas, F., sludge management 1378
Samaniego, F. J., discharge standards 471
Sample storage, BOD test 1253
Sampling, suspended solids 1481
Sand filters, and one-cell lagoons 587
Sanks, R. L., oxidation ditch start-up 444
Sarich, R. S., Jr., sludge dewatering 1385
Satellites, in water pollution control (Monitor) 420
Saunders, F. M., mean-cell residence time 201
Scheff, P. A., treatment plant emissions 223
Scheybeler, B. J., sludge metal removal 25
Schroeder, E. D., effluent variability 546
discharge standards 471
performance stability 457
Scouring, wool 311
Secondary treatment, priority pollutants 247a
Sediments (Literature Review) 999
Seeding, BOD test 1253
Senate Environment Committee, assignments to 142a
97th Congress 88a
Senske, G. E., nitrification/denitrification 1434
Separation, wool scouring 311
Septic systems, leaching 1717
Settleability, urban runoff 1726
Sewer flow, measurement 113
Sewers, and septic leachates 1717
Sewers, infiltration/inflow 491, 1620
solids deposition 1627
Shah, R., centrifuge evaluation 1568
Sherrard, J. H., activated sludge process 1609
nickel toxicity 1314
Shieh, W. K., fluidized-bed systems 1574
Shock loadings, process resistance 482
Sikora, L. J., composting materials 1702
Skinner, S. M., Jr., septic leachates 1717
Sludge, acid phase anaerobic digestion 352
centrifuge evaluation 1568
dewatering 530, 1708
dissolved gas flotation 1198
energy from combustion 190
metals removal 25
ocean dumping of (Monitor) 1142
parasite viability 1334
vacuum filtration 1385
Sludge digestion, comparative processes 216
Sludge disposal, polymer costs 162
Philadelphia's plan 89a
Sludge handling (Literature Review) 726
Sludge lines, friction losses 1303
Sludge management, activated sludge treatment 1378
economics 560
Sludge odors, and ORP use 299
Sludge production, anaerobic processes 482
Small communities, combined sewer overflows 497
Small flow systems, comparative energy efficiencies 1172
Smith, D. L., plant survey 1272
Smith, E. D., RBC upgrading 474, 1158
Smith, E. P., van Belle-Fisher statistic (Communication) 1648
Smith, M. L., sludge metal removal 25
Snowmelt, urban 119
Sodium nitrate, for sludge odors 299
Sodium removal, soil-turf filters 1408
Soil, viral transport 1492
Soil-turf filters, wastewater reclamation 1402, 1408
Solid waste, and sludge combustion 190
Solid wastes, effect on water quality 896
Solids retention time, lagoons 176
Solubility, of flotation gases 1198
Sorber, C. A., viral transport 1492
South Dakota WPCA (meeting report) 747a
Stability, sludge digestion 216
Stabilization ponds, benefits of (Feature) 1559
Standard deviation, for process stability 457
"Standard Methods," changes in BOD test 1253
Standards, water quality planning 246
Starnes, J. C., vacuum wastewater collection 59
Start-up, physical-chemical plant 318
AWT plant 451
oxidation ditch 444
Statistics, effluent quality 546
process stability 457
geometric mean 471
Statistical analysis, plant performance 167
Steel industry wastes (Literature Review) 844
Steel pickling liquor, RCRA requirements 690a
Stensel, H. D., international nutrient control 1691
Stephenson, J. P., digester mixing efficiency 78
Stormwater, runoff settleability 1726
Stormwater treatment, small urban lakes 594
Stover, E. L., ozone disinfection 1637
Stripping, ammonia 1391
Suffern, J. S., metals accumulation 1599
Suidan, M. T., anaerobic filters 1519
Sujarittanonta, S., nickel toxicity 1314
Sulfites, marine ecosystem recovery 1339
Sulfuric acid, sludge metal removal 25
Superfund, Corps of Engineers 642a
House bills 28a
president signs bill 89a
Senate bills 28a
Supreme Court, EPA regulation ruling 88a
Milwaukee v. Ill. 375a
Surveys, plant problems 1272
Suspended solids, automatic sampling 1481
removal by sand filters 587
Sutton, P. M., fluidized-bed systems 1574
nitrification/denitrification 176, 1294
Switzenbaum, M. S., anaerobic wastewater treatment processes 482
Sykes, R. M., limiting nutrients 1213
Synthetic fuel wastes 828
Synthetic wastewater, ultrafiltration 1206
Systems analysis (Literature Review) 612
Szluha, A. T., metals accumulation 1599

T

Tabak, H. H., priority pollutant biodegradability 1503
Tahoe, California, Operation Report 398
Tannery wastes, treatment in POTW 1732
Tate, R. L. III, land application of wastewater 85
Terry, R. E., land application of wastewater 85
Texas WPCA (meeting report) 695a
Textile wastes (Literature Review) 797
Therien, N., activated sludge process 576
Thermal inactivation, pathogens in compost 1683
Thermal pollution (Literature Review) 949
Thirumurthi, D., package plant aeration 33
Tidal exchanges, modeling (Communication) 1551
Tilapia, in lagoons 1599
Tischler, L. F., stabilization ponds (Feature) 1559
Titration, alkalinity determination 1243
Toxic chemicals, pretreatment 1457
Toxic streams, EPA list 644a
Toxicity, ammonia on fish 367
of nickel 1314
Toxics list, BCME deletion 198a
two deletions 143a
Tracers, digester mixing 78
Treatability, urban snowmelt 119
Treatment alternatives, combined sewer overflows 497
Trickling filters, RBC upgrading 1158
upgrading with RBCs 474, 1469
Truckee, California, Operation Report 398
Tsugita, R. A., I/I monitoring 1620
Tubbs, L. J., non-point-source pollution 1425

U

Ultrafiltration, for water reuse 1206
Unit energy costs, treatment processes 1172
United Nations, Mediterranean cleanup 149
Uptake rates, oxygen 48, 1742
Uranium, removal from mine effluents 1233
Urban lakes, stormwater treatment 594
Urban runoff (Literature Review) 770
settleability 1726
Utah WPCA (meeting report) 578a

V

Vacuum filtration, sludge 1385
Vacuum sewers, costs and operation of 59
Van Dam, D., phosphorus control 1732
van Vliet, B. M., adsorbent performance 1585
Variability, of effluent quality 546
Vesilind, P. A., sludge management 560
Viability, activated sludge 1533
sludge parasites 1334
Virginia WPCA (meeting report) 444a
Viruses, groundwater transport 1492
(Literature Review) 1138

W

Wadden, R. A., treatment plant emissions 223
Waivers, Section 301(h) (Monitor) 1554
301(h) 689a
Waller, D. H., Great Lakes loadings 387
Wankoff, W., centrifuge evaluation 1568
Wastewater, computerized biological monitoring 505
Wastewater solids, reuse 85, 237
Wastewater treatment, anaerobic processes 482
developing countries 1413
nitrogen removal 89
small flow systems 1172
Water and Pollution Control Association of South Carolina (meeting report) 93a
Water quality, ozone disinfection 1637
Water quality criteria, EPA 28a
Water quality planning, and DO 246
Water quality standards, WPCF Position Paper (Feature) 426, 430
Water reclamation (Literature Review) 751
Water Resources Council, proposed elimination 304a
Water reuse, by ultrafiltration 1206
Watershed management, review 291
Wayne County (Mich.), wastewater treatment 1366
Webber, R. T., uranium wastes 1233
Weber, W. J., Jr., adsorbent performance 1585
mass transfer parameters 1541
Western Canada PCA (meeting report) 149a
West Virginia WPCA (meeting report) 581a
Whaley, S. A., nitrogen loss 1677
Whipple, W., Jr., runoff settleability 1726
Williamson, K. J., activated sludge viability 1533
Willson, G. B., composting materials 1702
Wilson, R. W., nitrification/denitrification 1294
Woo, C. P., compost filters 185
Wool scouring, biological treatment 311
WPCA of Pennsylvania (meeting report) 747a
WPCF, 1981 Conference 421a, 503a, 1672
financial report 608
WPCF, position papers 430, 1452
WPCF, response to *Washington Post* series 1152
WPCF, Presidential message 4, 1356
Wycoff, R. L., water quality planning 246

Y

Yang, W., wool scouring 311
Young, B. A., gas flotation 1198
Young, J. C., standard methods BOD test 1253

Z

Zeolite, activated sludge process 344